Thus the reducing agents had at their disposal large amounts of oxygen in the form of iron protoxide, and were not constrained to decompose manganese protoxide.
All the reactions reviewed up to the present yield products which, like the reagents themselves, preserve the fluid state of aggregation. They thus manifest themselves only in an increase in the amount and change in appearance of the slag, but do not alter the quiet state of the euti.ro bath.
In the elimination of carbon it is otherwise. Thin gives rise to a gaseous, product, which cannot bo hold back by either the metal or slag. It must escape, on the contrary, and is forced through the slag, giving rise to very apparent and characteristic phenomena.
4. CAHHON.
According to the formula C+0=GO, 1 per cent, carbon requires 1"B8 per cent. 0, and produces 2%H8 per cent. CO . . . (35).
Its removal admits of being compared very well with the removal of a gas from a liquid, which has been formed therein by the reaction of some corresponding reagent. The further course is different from the concentration of the agents reacting on one another. A concentrated solution of carbonate of soda, for example, sets up from small drops of a concentrated acid an extremely powerful reaction. The reaction takes place at the point of contact with effervescence, and a somewhat too rich addition of acid produces losses by splashes or overflowing of the" solution ; but if by means of gradual addition of the acid to the carbonate salt it has become poorer, HO each molecule of acid does not longer come into contact with the upper surface of the salt, and the acid is capable ot; penetrating into the solution, and its action only taken place in the deeper layers, and after being spread out over a large apace. It thus gives rise to bubbles of gas in the interior of the fluid, which rise up in it and thereby give it the appearance of boiling. With progressive exhaustion of the carbonate salt, the apparent boil becomes feebler, the sisse of the gas bubbles produced becomes diminished so far that the individual bubbles are not